

AMENDMENTS TO THE CLAIMS

Please amend claims 1-2, 4-6, 8, 10-11, 13, 15-27, 29-32, 34, 37, 39, 41-44, 46, 49-50, and 52-53; please add new claims 54-95, and cancel claim 3 without prejudice or disclaimer of the subject matter therein, as indicated below.

1. (Currently amended) A ~~multifunction~~ field-deployable apparatus comprising:

a collapsible ring support element, said collapsible ring support element comprising (1) at least one substantially tubular and inflatable ring or (2) a supporting framework comprising a plurality of substantially rigid support members, said collapsible ring support element ~~defining~~ having a vacant center;

~~at least one inflation means for inflating said ring support element,~~

~~at least two pressure~~ a plurality of deformable membranes extending at least partially across the vacant center of said collapsible ring support element, said membranes ~~and said ring support element~~ defining at least a portion of at least one inflatable reflector chamber,

wherein at least one of said membranes is pressure deformable, mechanically deformable, or both,

wherein at least one of said membranes is reflective to electromagnetic radiation,[[;]] and

wherein the apparatus comprises (i) a safety structure,

(ii) a support and orienting structure, (iii) a material collecting, concentrating, or processing structure, or (iv) a combination of two or more thereof

~~at least one pressure adjusting or inflating means for adjusting the pressure within or inflating said reflector chamber.~~

2. (Currently amended) The apparatus according to claim 1, wherein one or more of: said collapsible ring support element; said safety structure; said support and orienting structure; said material collecting, concentrating, or processing structure; and said membranes comprise substantially thin and flexible sheets comprising at least one type or class of substantially polymeric material materials,

~~whereby said apparatus is compactly foldable.~~

3. (Canceled)

4. (Currently amended) The apparatus according to claim 1, further comprising at least one accessory device attached to said apparatus, the accessory device being selected from the group consisting of:

a handle;

an apertured tab;

a tying or hanging strap;

a storage pouch for storing the deflated and folded apparatus; ~~and~~

a pouch for filling with material to stabilize the apparatus;

a stabilizing cable or line; and
a cable attached to a ground stake.

5. (Currently amended) The apparatus according to claim 1, further comprising at least one fastener device attached to said apparatus, the fastener device being selected from the group consisting of:

a clevis;
a clip;
a bracket;
a mounting stud;
a socket;
a line; and
a hook-and-loop fastening patch;
a hook; and
a tongue-and-groove fastening mechanism.

6. (Currently amended) The apparatus according to claim 1, wherein the plurality of ~~pressure~~-deformable membranes comprise ~~at least two reflective membranes including a primary reflective membrane and at least one redundant or auxiliary reflective membrane.~~

7. (Original) The apparatus according to claim 1, further comprising at least one access port having a fluid-tight cover.

8. (Currently amended) The apparatus according to claim 1, wherein at least one of said ~~pressure~~-deformable membranes has at least one duct or port, disposed to transfer substantially

fluidic materials to, from, or through at least one said reflector chamber.

9. (Original) The apparatus according to claim 8, wherein said port has a conduit, extending through said reflector chamber, disposed to drain substantially fluidic materials collecting on the top of the apparatus through said conduit to an external location substantially below said reflector chamber.

10. (Currently amended) The apparatus according to claim 1, wherein said collapsible ring support element comprises at least two ~~of said~~ substantially inflatable and tubular rings, at least one of said rings is attached to extend above at least one other of said rings and said ~~pressure~~ deformable membranes.

11. (Currently amended) The apparatus according to claim 1, wherein said collapsible ring support element comprises at least two ~~of said~~ substantially inflatable and tubular rings, at least two of said rings being located between at least two of said ~~pressure~~ deformable membranes,

whereby the internal volume capacity of the apparatus is increased.

12. (Original) The apparatus according to claim 1, further including at least one gutter attached to said apparatus for capturing materials, whereby the effective capture area is increased.

13. (Currently amended) The apparatus according to claim 1,

further comprising at least one elastic band attached to at least one surface of at least one of said ~~pressure~~ deformable membranes to cause wrinkling of said membrane surface as a safety means.

14. (Original) The apparatus according to claim 1, further including at least one cover attached to at least one point of said apparatus as a safety means, said cover being retractable.

15. (Currently amended) A field-deployable apparatus ~~for use~~ operable as a radiant electromagnetic energy concentrating, focusing or beaming apparatus comprising:

a collapsible ring support element, said collapsible ring support element comprising (1) at least one substantially tubular and inflatable ring or (2) a supporting framework comprising a plurality of substantially rigid support members, said collapsible ring support element ~~defining~~ having a vacant center;

~~at least one inflation means for inflating said ring support element;~~

~~at least two pressure~~ a plurality of deformable membranes extending at least partially across the vacant center of said collapsible ring support element, said membranes ~~and said ring support element~~ defining at least a portion of at least one inflatable reflector chamber,

wherein at least one of said membranes is pressure deformable, mechanically deformable, or both,

wherein at least one of said membranes is reflective to electromagnetic radiation, and

~~at least one pressure adjusting or inflation means for adjusting the pressure within or inflating said reflector chamber;~~

wherein at least one structure that does not have the function of ~~means for performing at least one function not involving~~ concentrating, focusing, or ~~and~~ beaming radiant electromagnetic energy, and ~~performing means~~ is selected from the group consisting of:

~~a means for collecting fluid~~ collecting structure;

~~a means for storing fluid~~ storing structure;

~~a means for distributing fluid~~ distributing structure;

~~a means for processing fluid~~ processing structure;

~~a means for fermenting materials~~ fermenting structure;

~~a means for storing material~~ storing structure;

~~a means for providing waterborne flotation~~ structure;

~~a means for providing~~ snowborne transportation structure;

~~a means for providing a compliant support~~ structure;

~~a means for immobilizing a broken limb~~ immobilizing structure;

~~a means for concentrating~~ sound concentrating structure;

~~an a means for providing electrostatic insulation~~ structure;

~~a means for providing thermal insulation;~~ and

an a means for providing electromagnetic insulation structure.

16. (Currently amended) A method of establishing at least

one function or element of life-sustaining infrastructure utilizing a field-deployable apparatus, comprising the steps of:

providing a collapsible ring support element, said collapsible ring support element comprising (1) at least one substantially tubular and inflatable ring or (2) a supporting framework comprising a plurality of substantially rigid support members, said collapsible ring support element ~~defining~~ having a vacant center;

~~providing at least one inflation means for inflating said ring support element;~~

~~providing at least two pressure~~ a plurality of deformable membranes extending at least partially across the vacant center of said collapsible ring support element, said membranes and ~~said ring support element~~ defining at least a portion of at least one ~~inflatable~~ reflector chamber, at least one of said ~~pressure~~ deformable membranes being reflective to electromagnetic radiation,

wherein at least one of said membranes is pressure deformable, mechanically deformable, or both, and

wherein the apparatus comprises (i) a safety structure, (ii) a support and orienting structure, (iii) a material collecting, concentrating, or processing structure, or (iv) a combination of two or more thereof;

~~providing at least one pressure adjusting or inflation means for adjusting the pressure within or inflating said reflector chamber; and~~

deploying said collapsible ring support element and said ~~pressure~~ deformable membranes in a manner effective for performing a selected function.

17. (Currently amended) The method according to claim 77
16, wherein the deploying step comprises the following steps:

deploying ~~inflating~~ said collapsible ring support element
to support and tension a periphery of said ~~pressure~~-deformable
membranes;

adjusting pressure within said reflector chamber to deform
at least one reflective membrane into a functional concave
reflector; and

positioning the reflective membrane in a manner effective
for allowing transmission of radiant electromagnetic energy
between a source and target,

whereby said apparatus is operable to concentrate radiant
electromagnetic energy emitted from an electromagnetic source
onto an energy-absorbing object placed in proximity to a focal
point defined by said apparatus, said apparatus is operable to
project radiant electromagnetic energy emitted from a source of
electromagnetic energy placed in proximity to a focal point
defined by said apparatus, or both.

18. (Currently amended) The method according to claim 16,
wherein the deploying step comprises the following steps:

deploying ~~inflating~~ said collapsible ring support element
to support and tension a periphery of said ~~pressure~~-deformable
membranes;

adjusting pressure within said reflector chamber to deform
at least one membrane into a substantially concave surface; and

positioning said apparatus in a substantially horizontal
orientation with a ~~the~~ substantially concave surface facing

upward,

whereby said apparatus is operable to capture or hold, or to capture and hold, substantially fluidic materials, ~~and~~

~~whereby said apparatus is operable to support at least one item on land and on water.~~

19. (Currently amended) The method according to claim 16, wherein the deploying step comprises the following step:

positioning said apparatus between an item and the surrounding environment to shield or insulate said item from said environment,

~~whereby said apparatus is operable to provide thermal, electrostatic, and electromagnetic insulation.~~

20. (Currently amended) A multifunction ~~field portable~~ field-deployable apparatus comprising:

a collapsible ring support element, said collapsible ring support element comprising (1) at least one substantially tubular and inflatable ring or (2) a supporting framework comprising a plurality of substantially rigid support members, said collapsible ring support element ~~defining~~ having a vacant center;

~~at least one inflation means for inflating said ring support element,~~

~~at least two pressure~~ a plurality of deformable membranes extending at least partially across the vacant center of said collapsible ring support element, said membranes ~~and said ring support element~~ defining at least a portion of at least one inflatable or material-fillable central chamber; and

~~at least one pressure adjusting or inflation means for
adjusting the pressure within or inflating said chamber~~

wherein ~~whereby~~ the apparatus is operable to collect,
concentrate, process, or store material ~~provide at least one~~
~~non-electromechanic function.~~

21. (Currently amended) The apparatus as recited in claim 1, ~~further comprising~~ wherein said safety structure comprises at least one safety shield or safety cage operable to reduce the risk of accidental or unintentional exposure to concentrated electromagnetic radiation.

22. (Currently amended) The apparatus as recited in claim 1, wherein said safety structure comprises ~~further comprising~~ at least one safety shield or safety cage disposed to provide a physical barrier at least partially surrounding a focal point defined by said apparatus.

23. (Currently amended) The apparatus as recited in claim 1, wherein said safety structure comprises ~~further comprising~~ at least one inflatable safety shield or inflatable safety cage disposed to provide a physical barrier at least partially surrounding a focal point defined by said apparatus.

24. (Currently amended) The apparatus according to claim 21, wherein said safety structure comprises ~~wherein the apparatus includes~~ at least one safety shield disposed to provide a physical barrier at least partially surrounding a focal point defined by said apparatus; said safety shield being

selected from the group consisting of:

an inflatable safety shield comprising a plurality of stacked inflatable rings;

an inflatable safety shield comprising a plurality of stacked inflatable rings providing an outer contour effectively defining a predetermined portion of an effectively spherical surface; and

an inflatable safety shield comprising a plurality of basic reflector apparatuses each having a removable reflector chamber in a removed condition.

25. (Currently amended) The apparatus according to claim 21, wherein said safety structure comprises ~~wherein the apparatus includes~~ at least one safety cage disposed to provide a physical barrier at least partially surrounding a focal point defined by said apparatus; said safety cage being selected from the group consisting of:

an inflatable safety cage comprising a plurality of stacked inflatable rings;

an inflatable safety cage comprising a plurality of stacked inflatable rings providing an outer contour effectively defining a predetermined portion of an effectively spherical surface;

an inflatable safety cage comprising an inner membrane, an outer membrane, and a plurality of membranous ribs joined to said inner and outer membranes;

an inflatable safety cage comprising a plurality of connected inflatable tubes;

an inflatable safety cage comprising a plurality of connected inflatable arcuate tubes effectively defining a

predetermined portion of an effectively spherical surface;

a collapsible substantially rigid safety cage comprising a plurality of substantially rigid elements rotatably attached to said apparatus and stabilized by one or more attached cords or cable stays;

a globe-shaped combination safety cage and effectively spherical support comprising a plurality of substantially rigid elements rotatably attached to form a collapsible structure and further attached to said collapsible ring support element to stabilize the collapsible structure; and

a safety cage comprising a collapsible framework.

26. (Currently amended) The apparatus according to claim 21, wherein said safety structure comprises ~~wherein said apparatus includes~~ at least one safety shield comprising a safety net or mesh for providing a physical barrier at least partially surrounding a focal point defined by said apparatus.

27. (Currently amended) The apparatus according to claim 21, wherein said safety structure comprises ~~wherein said apparatus includes~~ at least one safety cage comprising a safety net or mesh for providing a physical barrier at least partially surrounding a focal point defined by said apparatus.

28. (Previously presented) The apparatus as recited in claim 21, wherein said at least one said safety shield or safety cage is removably attached to said apparatus.

29. (Currently amended) The apparatus as recited in claim

21, wherein said safety structure comprises ~~wherein the apparatus includes~~ at least one inflatable safety shield removably attached to the apparatus.

30. (Currently amended) The apparatus as recited in claim 21, wherein said safety structure comprises ~~wherein the apparatus includes~~ at least one inflatable safety cage removably attached to the apparatus.

31. (Currently amended) The apparatus as recited in claim 21, wherein said safety structure comprises a ~~wherein at least one said safety shield or safety cage is~~ substantially integral with said apparatus.

32. (Currently amended) The apparatus as recited in claim 21, wherein said safety structure comprises a ~~wherein at least one said safety shield or safety cage~~ which is inflatable and has one or more interconnecting gas ports to an inflatable ring support element of the field-deployable apparatus, said interconnecting gas ports being operable to inflate said safety shield or safety cage simultaneously with said inflatable ring support element of said apparatus.

33. (Previously presented) The apparatus as recited in claim 32, wherein at least one said safety shield or safety cage is substantially integral with said apparatus.

34. (Currently amended) The apparatus as recited in claim 1, wherein the support and orienting structure comprises further

~~comprising~~ one or more rigid rods attached to and operable to incline said apparatus.

35. (Previously presented) The apparatus as recited in claim 34, wherein said one or more rigid rods are removably attached to said apparatus.

36. (Previously presented) The apparatus as recited in claim 1, further comprising a focal point support operable to support one or more items in proximity to a focal point defined by said apparatus.

37. (Currently amended) The apparatus as recited in claim 36, wherein said focal point support is selected from the group consisting of:

two inflatable pressure vessels disposed to support an element ~~a rod~~ spanning said apparatus;

an inflatable safety cage disposed to support an element ~~a rod~~ spanning said apparatus;

an inflatable safety shield or safety cage disposed to support a cable-stayed support;

an inflatable tube stabilized by a plurality of tensioned cable stays; and

an adjustable inflatable truss.

38. (Previously presented) The apparatus as recited in claim 36, wherein said focal point support comprises a frame supported by a plurality of cable-stays.

39. (Currently amended) The apparatus as recited in claim 38, wherein said frame is selected from the group consisting of:

a rigid frame;

a self-leveling pivoting frame;

a frame comprising a rotatably attached self-leveling pivoting frame;

a frame comprising a rotatably attached self-leveling pivoting frame and a device operable to fix or hold the relative positions of said frame;

a frame with an internally reflective, articulated structure attached to the frame;

a basket;

a flexible wire or cable basket;

a bracket or ring; ~~and~~

two brackets or rings attached by an adjustable wire loop;

a wire loop;

an adjustable wire loop;

a wire loop having a cinching device;

a flexible wire or cable

a tube;

a rod; and

a cable.

40. (Previously presented) The apparatus as recited in claim 38, further comprising a safety shield or safety cage, wherein said cable-stayed focal point support is attached to, and supported by, said safety shield or safety cage.

41. (Currently amended) The apparatus as recited in claim

1, wherein one or more of said ~~pressure~~-deformable membranes are removably attached to said collapsible ring support element of said apparatus.

42. (Currently amended) The apparatus as recited in claim 41, wherein one or more of the removably attachable membranes are removably attached to said collapsible ring support element of said apparatus using at least one tongue-and-groove fastening mechanism.

43. (Currently amended) The apparatus as recited in claim 1, wherein said at least one reflector chamber is removably attached to said collapsible ring support element of said apparatus.

44. (Currently amended) The apparatus as recited in claim 1, further comprising one or more elements selected from the group consisting of:

a substantially rigid support element disposed to support and orient said apparatus;

an inflatable support element disposed to support and orient said apparatus;

a safety shield or cage disposed to reduce the risk of accidental or unintentional exposure to electromagnetic radiation;

an inflatable safety shield or cage disposed to reduce the risk of accidental or unintentional exposure to electromagnetic radiation;

a focal point support disposed to support an item in

proximity to a focal point defined by said apparatus;

an inflatable focal point support disposed to support an item in proximity to a focal point defined by said apparatus;

a cover;

an inflatable cover; ~~and~~

a safety cage including a net or mesh; and
combinations thereof.

45. (Previously presented) The apparatus as recited in claim 1, wherein said apparatus further comprises a secondary central inflatable pressure envelope disposed within said reflector chamber, wherein the degree of energy concentration provided by the reflective membrane of said apparatus is adjustable by adjusting the pressure within said secondary pressure envelope.

46. (Currently amended) The apparatus as recited in claim 1, wherein one or more of said ~~pressure~~-deformable membranes comprise a pre-formed reflective membrane having a supporting cord or cable spanning said collapsible ring support element to provide a reflective membrane defining a plurality of focal points.

47. (Previously presented) The apparatus as recited in claim 1, wherein an external surface of the apparatus has a high-emissivity surface.

48. (Previously presented) The apparatus as recited in claim 1, wherein an external surface of the apparatus has a

camouflaged surface.

49. (Currently amended) The apparatus as recited in claim 1, wherein said reflective membrane ~~apparatus further~~ comprises a reflective membrane comprising a surface having a non-paraboloid shape.

50. (Currently amended) The apparatus as recited in claim 1, wherein said reflective membrane ~~apparatus further~~ comprises a reflective membrane comprising a substantially faceted surface.

51. (Previously presented) The apparatus as recited in claim 1, further comprising one or more light-attenuator devices operable to attenuate light or radiant electromagnetic energy.

52. (Currently amended) The apparatus as recited in claim 1, wherein said further comprising one or more support elements are inflatable ~~disposed to support and orient said apparatus.~~

53. (Currently amended) The apparatus as recited in claim 1, further comprising ~~a support element disposed to support and orient said apparatus~~ and an automated sun-tracking apparatus.

54. (New) The apparatus of claim 1, wherein said apparatus has one or more said material capturing structures selected from the group consisting of:

an inflatable ring extending above the plurality of deformable membranes;

- a gutter;
- an outwardly extendable cover;
- an extendable membrane;
- a high-emissivity surface; and
- combinations of two or more thereof.

55. (New) The apparatus of claim 1, further comprising one or more material transferring elements operable to transfer a material to, from, or through said at least one reflector chamber, said material transferring elements being selected from the group consisting of:

- a valve;
- a port;
- a funnel;
- a conduit;
- a pump; and
- combinations of two or more thereof.

56. (New) The apparatus of claim 1, wherein said apparatus has one or more said material processing structures selected from the group consisting of:

- a filter;
- a distillation apparatus;
- a anaerobic airlock or pressure relief valve; and
- a sterilizing apparatus.

57. (New) The apparatus of claim 20, wherein said apparatus has one or more said material capturing structures selected from the group consisting of:

an inflatable ring extending above the plurality of deformable membranes;

a gutter;

an outwardly extendable cover;

an extendable membrane;

a high-emissivity surface; and

combinations of two or more thereof.

58. (New) The apparatus of claim 20, further comprising one or more material transferring elements operable to transfer a material to, from, or through said at least one central chamber, said material transferring elements being selected from the group consisting of:

a valve;

a port;

a funnel;

a conduit;

a pump; and

combinations of two or more thereof.

59. (New) The apparatus of claim 20, wherein said apparatus has one or more said material processing structures selected from the group consisting of:

a filter;

a distillation apparatus;

a anaerobic airlock or pressure relief valve; and

a sterilizing apparatus.

60. (New) The apparatus of claim 1, additionally comprising

at least one pressure adjusting device for adjusting the pressure within an inflatable reflector chamber.

61. (New) The apparatus of claim 60, wherein said at least one pressure adjusting device is selected from the group consisting of a valve, a port, a pump, and a gas canister or cylinder.

62. (New) The apparatus of claim 1, additionally comprising at least one pressure adjusting device for adjusting the pressure within an inflatable ring support element.

63. (New) The apparatus of claim 62, wherein said at least one pressure adjusting device is selected from the group consisting of a valve, a port, a pump, and a gas canister or cylinder.

64. (New) The apparatus of claim 1, additionally comprising one or more flexible elements, disposed between and attached to at least two of the plurality of deformable membranes.

65. (New) The apparatus of claim 1, wherein the plurality of deformable membranes includes a mechanically deformable reflective membrane attached or bonded to a pressure-deformable substrate membrane.

66. (New) The apparatus according to claim 1, wherein said apparatus is compactly foldable.

67. (New) The apparatus according to claim 60, wherein said pressure adjusting device includes at least one valve comprising a flexible conduit closed by a closure means selected from the group consisting of:

- an affixed plug;
- a flexible tongue-and-groove valve;
- a self-sealing membrane valve;
- a clamp; and
- a tie.

68. (New) The apparatus according to claim 62, wherein said pressure adjusting means includes at least one valve comprising a flexible conduit closed by a closure means selected from the group consisting of:

- an affixed plug;
- a flexible tongue-and-groove valve;
- a self-sealing membrane valve;
- a clamp; and
- a tie.

69. (New) The apparatus according to claim 6, wherein the plurality of deformable membranes additionally comprises at least one redundant or auxiliary reflective membrane.

70. (New) The apparatus according to claim 1, wherein the plurality of deformable membranes comprise at least two reflective membranes including a primary reflective membrane and at least one redundant or auxiliary reflective membrane, wherein the primary membrane and the redundant or auxiliary reflective

membrane have dissimilar optical characteristics.

71. (New) The apparatus of claim 15, additionally comprising at least one pressure adjusting device for adjusting the pressure within an inflatable reflector chamber.

72. (New) The apparatus of claim 71, wherein said at least one pressure adjusting device is selected from the group consisting of a valve, a port, a pump, and a gas canister or cylinder.

73. (New) The apparatus of claim 15, additionally comprising at least one pressure adjusting device for adjusting the pressure within an inflatable ring support element.

74. (New) The apparatus of claim 73, wherein said at least one pressure adjusting device is selected from the group consisting of a valve, a port, a pump, and a gas canister or cylinder.

75. (New) The apparatus of claim 15, additionally comprising one or more flexible elements, disposed between and attached to at least two of the plurality of deformable membranes.

76. (New) The apparatus of claim 15, wherein the plurality of deformable membranes includes a mechanically deformable reflective membrane attached or bonded to a pressure-deformable substrate membrane.

77. (New) The method of claim 16, wherein the apparatus additionally comprises at least one pressure adjusting device for adjusting the pressure within an inflatable reflector chamber.

78. (New) The method of claim 16, wherein the inflatable ring support element additionally comprises at least one pressure adjusting device.

79. (New) The method of claim 16, wherein the apparatus additionally comprises one or more flexible elements, disposed between and attached to at least two of the plurality of deformable membranes.

80. (New) The method of claim 16, wherein the plurality of deformable membranes includes a mechanically deformable reflective membrane attached or bonded to a pressure-deformable substrate membrane.

81. (New) The method according to claim 16, wherein the apparatus comprises a supporting framework comprising a plurality of substantially rigid support members, and the deploying step comprises the following steps:

deploying said collapsible ring support element to support and tension a periphery of said deformable membranes; and

positioning the reflective membrane in a manner effective for allowing transmission of radiant electromagnetic energy between a source and target,

whereby said apparatus is operable to concentrate radiant electromagnetic energy emitted from an electromagnetic source onto an energy-absorbing object placed in proximity to a focal point defined by said apparatus, said apparatus is operable to project radiant electromagnetic energy emitted from a source of electromagnetic energy placed in proximity to a focal point defined by said apparatus, or both.

82. (New) The method according to claim 16, wherein the apparatus comprises a supporting framework comprising a plurality of substantially rigid support members, and the deploying step comprises the following steps:

deploying said collapsible ring support element to support and tension a periphery of said deformable membranes to provide a substantially concave surface; and

positioning said apparatus in a substantially horizontal orientation with a substantially concave surface facing upward,

whereby said apparatus is operable to capture or hold, or to capture and hold, substantially fluidic materials.

83. (New) The method of claim 81, wherein the apparatus additionally comprises one or more flexible elements, disposed between and attached to at least two of the plurality of deformable membranes.

84. (New) The method of claim 81, wherein the plurality of deformable membranes includes a mechanically deformable reflective membrane attached or bonded to a pressure-deformable substrate membrane.

85. (New) The method according to claim 17, further comprising providing or deploying, or providing and deploying (1) an energy-absorbing object supported in proximity to the focal point, (2) an energy-emitting object supported in proximity to the focal point, or both.

86. (New) The method according to claim 85, wherein the energy-absorbing object is selected from the group consisting of:

a power generation apparatus operable to provide electrical power, thermal power, mechanical power, or combinations thereof;

a cooking apparatus or accoutrement;

a material purifying or pasteurizing apparatus;

a material sterilization apparatus;

a communications receiver apparatus;

an illumination apparatus; and

combinations thereof, and

wherein the energy-absorbing object is selected from the group consisting of:

a light source; and

a communications transmitter apparatus.

87. (New) The method according to claim 81, wherein the method further comprises providing or deploying, or providing and deploying: (1) an energy-absorbing object supported in proximity to the focal point, (2) an energy-emitting object supported in proximity to the focal point, or both.

88. (New) The method according to claim 87, wherein the energy-absorbing object is selected from the group consisting of:

- a power generation apparatus operable to provide electrical power, thermal power, mechanical power, or combinations thereof;
- a cooking apparatus or accoutrement;
- a material purifying or pasteurizing apparatus;
- a material sterilization apparatus;
- a communications receiver apparatus;
- an illumination apparatus; and
- combinations thereof, and

wherein the energy-absorbing object is selected from the group consisting of:

- a light source; and
- a communications transmitter apparatus.

89. The apparatus as recited in claim 49, wherein said non-paraboloid shape is selected from the group consisting of:

- a radially undulating or stepped contour;
- a circumferentially undulating or scalloped contour;
- a dimpled contour;
- a faceted contour;
- a contour comprising a series of conic sections; and
- a contour having a non-constant radius of curvature.

90. The apparatus as recited in claim 51, wherein the light-attenuator device is selected from the group consisting of:

- an adjustable louver;

an adjustable iris;
an off-axis light-attenuation grating;
a darkened transparent film; and
a selectively transparent membrane.

91. The apparatus as recited in claim 1, wherein said support and orienting structure comprises an inflatable structure.

92. The apparatus as recited in claim 91, wherein said support and orienting structure is integral with an inflatable ring support element.

93. The apparatus of claim 1, further comprising an alignment device selected from the group consisting of:

a magnetic compass;
an inclinometer;
a level; and
a visual alignment guide.

94. (New) The apparatus of claim 22, wherein said focal point is external to the reflector chamber.

95. (New) The apparatus of claim 23, wherein said focal point is external to the reflector chamber.